

## **CONTENTS**

	Page
Immediate steps	1
Stain removal supplies	2
Treating stains	7
Testing stain removers	7
Working surface	7
Sponging	7
Flushing	8
Tamping	10
Using a spoon	10
Removing stains from suede and leather	11
Removing stains from vinyl	11
Stain removal guide	11
Stain index	24

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# REMOVING STAINS FROM FABRICS

This publication contains instructions for removing most stains at home. It tells what to do immediately when a stain occurs and what followup steps to take.

It is important to treat stains promptly with the correct methods. With the wrong treatment, some stains become more difficult or even impossible to remove. Other stains are relatively easy to remove if they are treated promptly but become permanently set if allowed to age.

In this publication, most stains are classified into nine groups. Separate treatment procedures are given for the stains that do not fall into the nine groups. There is also a method for treating unknown stains.

To find the proper treatment for a stain, turn to the Stain Index at the back of the publication. Before treating a stain, read the general instructions on pages 7 to 10.

## IMMEDIATE STEPS

When a staining accident occurs, it is always safe to absorb excess liquid with a clean cloth, a white paper towel or tissue, a sponge, or absorbent cotton. Barely touch the drop of liquid with the tip of the absorbent material to avoid forcing the staining material further into the fabric. Do not apply any pressure to the stained area.

If the stain is not greasy, you may be able to remove some of the liquid that has soaked into the fabric by adding a little water to it. Water may cause spotting on some fabrics. It is safe to use

water if the care label says the article is washable. If the garment is not washable or there is no care label, test the fabric first in an inconspicuous place.

Place clean, dry absorbent material under the stained area. Sprinkle a few drops of cool water on the stain and blot immediately with more clean, dry absorbent material. Repeat until no more stain appears on the absorbent material. Use a clean, dry piece or section of the absorbent material above and below the stain each time water is added.

Oily stains should be sponged as soon as possible with drycleaning solvent (see p. 4). If the stain is on a garment being worn, be careful not to let drycleaning solvent come in contact with the skin, because drycleaning solvent can cause skin irritation. Use only a very small amount, and place absorbent material between the garment and the skin. Do not allow areas of clothing sponged with drycleaning solvent to touch

the skin until all the solvent has evaporated.

Drycleaning solvent is poisonous and may be flammable; follow precautions given on page 5, as well as any precautions on the label.

If the staining material has the consistency of a paste, remove the excess with a dull knife or spoon, taking care not to force the stain further into the fabric.

## STAIN REMOVAL SUPPLIES

If you keep on hand the supplies listed in this section, you will be prepared to remove almost any stain.

Most of these items are ordinary household supplies. Substitutes are suggested for a few materials that may be difficult to obtain.

Follow carefully all precautions for the storage and use of hazardous chemicals.

#### Absorbent materials

You will need an ample supply of clean absorbent materials, such as absorbent cotton, white paper towels, white facial tissues, and soft white cloths. Sponges are also useful, but test them with stain removers to make sure they will not be damaged.

#### Alcohol

Use rubbing alcohol or denatured alcohol (70-percent or 90-percent concentration). Do not use alcohol with added color or fragrances.

Alcohol fades some dyes, so test the fabric for color fastness before using alcohol on a stain.

For use on acetate, dilute alcohol with two parts water to one part alcohol.

CAUTION: Poisonous and flammable. Observe all precautions on the label.

#### Ammonia

Use household ammonia. Do not use ammonia with added color or fragrances.

Ammonia changes the color of some dyes. To restore the color, rinse the color-changed area thoroughly with water and apply a few drops of white vinegar. Rinse well with water again.

For use on wool and silk, dilute ammonia with an equal amount of water.

CAUTION: Poisonous. Avoid inhaling ammonia fumes. Ammonia will cause burns or irritation if it comes in contact with the

## CARE LABELING

Before treating a stain on a garment, read the information on the care label. Garments produced since 1972 are required by law to have a permanent label giving instructions for proper care.

Labels for washable items carry information on washing method, water temperature, drying method, drying temperature, and whether bleach can be used. Items that are washable are assumed to be drycleanable unless the label says "Do not dryclean." Labels may indicate that drycleaning only is recommended. Items that cannot be washed or drycleaned may be labeled "Wipe with damp cloth only" unless they cannot be maintained by any method.

Stores that sell piece or yard goods are required by law to include an appropriate care label with each piece of fabric sold (except remnants). If you sew, be sure you get these labels, then attach them permanently.

skin or eyes. Observe all precautions on the label.

## Amyl acetate

Amyl acetate (banana oil) is sold in drug stores. Ask for "chemically pure amyl acetate."

If you cannot obtain amyl acetate, you may substitute fingernail polish remover. Do not use oily-type nail polish remover.

CAUTION: Amyl acetate is poisonous and flammable. Do not

breathe the vapors. Avoid contact with the skin.

Amyl acetate is a strong solvent for plastics. Do not allow it to come in contact with plastics or furniture finishes.

#### **Brushes**

Brushes are used for a stain removal procedure called tamping. The most suitable brush is the type used for applying shoe polish, usually sold in a package of two.

Brushes used for stain removal should be new and should not be used for any other purpose. It is best to have two brushes, so that one can be used for stain removers that contain water and the other for drycleaning solvent and amyl acetate.

The brushes should have nylon bristles, because hair bristles become soft when wet with water. The bristles should be cut square, with all the bristles the same length.

If the brushes have plastic handles, test the handles with stain removal chemicals, especially amyl acetate, to make sure that chemicals will not damage the handles. This could cause additional stains.

If the handle is damaged by amyl acetate or some other stain remover, use a smooth spoon on the stain rather than a brush (see p. 10).

### Chlorine bleach

Chlorine bleach is used to remove many kinds of stains. Check

the label of bleach to be sure that it contains chlorine.

Chlorine bleach damages some fibers, dyes, and finishes. Check the care label for cautions regarding the use of bleach and read the label on the bleach container. Test the fabric in an inconspicuous place before you use bleach on the stain. Do not use chlorine bleach on fabric with a fire-retardant finish unless the care label states that chlorine bleach is safe.

The resin in some special finishes absorbs and retains chlorine, which weakens and yellows the fabric. Some fabrics do not show evidence of damage until they are ironed; then they may be severely weakened or discolored. See "Chlorine" in the "Stain Index" (p. 24) for a method of removing chlorine from such fabrics. Chlorine stains on silk, wool, or spandex fibers cannot be removed.

Do not use bleach in metal containers or with metal objects, because metal may speed up the action of the bleach enough to cause fiber damage. Also, metal in contact with bleach may tarnish and cause additional stains on fabrics. Avoid spilling or spattering bleach on garments and nearby surfaces.

CAUTION: Poisonous. Chlorine bleach will cause burns or irritation if it comes in contact with the skin or eyes. Observe all precautions on the label.

#### Coconut oil

Coconut oil is sold in drug stores and health food stores. It is used in the dry spotter solution (see below), which is used to remove many kinds of stains. If you cannot obtain coconut oil you may substitute mineral oil (sold in drug stores), which is almost as effective.

#### Color remover

Color remover is sold in drug stores, grocery stores, and variety stores, usually in the display of home dyes and tints.

Color remover is safe for most fibers, but fades or removes many dyes. If color remover causes a distinct color change rather than fading, you may be able to restore the original color by rinsing the area with water immediately. Hang the article to dry.

If color remover causes fading, the original color cannot be restored.

Do not use or store color remover in metal containers or use it with metal objects.

CAUTION: Poisonous. Avoid prolonged contact with skin. Observe all precautions on the label.

## Detergent

Use liquid hand dishwashing detergent. Detergents for automatic dishwashers, heavy-duty household detergents, and laundry detergents may contain alkalies that could set some stains.

# Drycleaning solvent

Drycleaning solvent is sold in drug stores, grocery stores, variety stores, hardware stores, and automobile service stations. It may contain any or all of the Trade names are used in this publication solely for the purpose of providing specific information. Mention of a trade name does not constitute a guarantee or warranty of the product by the U.S. Department of Agriculture or an endorsement by the Department over other products not mentioned.

following ingredients: petroleum solvent; petroleum hydrocarbon; petroleum distillate; 1, 1, 1, trichloroethane; perchloroethylene; or Varsol.

CAUTION: Poisonous; may be flammable. Store drycleaning sol-•vent in tightly capped unbreakable containers. Store it out of the reach of children and where it cannot be ignited by flames or sparks.

Drycleaning solvent gives off poisonous fumes and can be poisonous on contact with the skin. When using drycleaning solvent, work outside or in a well-ventilated room, and arrange work so that fumes are blown away from you. Do not lean close to your work. Use only a small quantity at a time. Do not pour solvent into a bowl. Do not allow children or pets into the room.

If you spill drycleaning solvent on your skin, wash it off immediately. If you spill it on your clothes, change immediately and hang garments outdoors until all solvent has evaporated.

Neither flammable nor nonflammable solvent should be used in a room with an open flame or gas pilot light, or where there is a chance of electrical sparks from refrigerators, fans, vacuum cleaners, or static. Do not smoke. Although nonflammable solvents do not ignite in contact with a flame or spark, they decompose and produce extremely toxic vapors. These vapors are especially toxic to persons who have consumed even a small amount of alcohol.

Never use drycleaning solvent in a washing machine. Do not put articles that are damp with solvent in a dryer.

Observe all precautions on the label.

## Dry spotter

To prepare dry spotter, mix one part cocount oil and eight parts drycleaning solvent. This solution is used to remove many kinds of stains.

Dry spotter keeps well if the container is tightly capped to prevent evaporation of the drycleaning solvent.

If you cannot obtain coconut oil, use mineral oil in the same amount as coconut oil.

CAUTION: Drycleaning solvent is poisonous and may be flammable. Follow all precautions given above for drycleaning solvent.

## Enzyme product

You may use either an enzyme presoak or an enzyme-containing laundry detergent. These products may be stored as purchased, but become inactive if stored after they have been made into a solution.

## Glycerine

Glycerine is sold in drug stores. It is used to prepare "wet spotter," which is used to remove many kinds of stains. It is also used to remove ballpoint ink stains.

## Hydrogen peroxide

Use the 3-percent solution sold as a mild antiseptic. Do not use the stronger solution sold in cosmetic departments for bleaching hair.

Hydrogen peroxide is safe for all fibers, but dyed fabrics should be tested for color fastness.

Store in a cool, dark place. Hydrogen peroxide loses strength when stored for extended periods of time.

Bleach that contains sodium perborate or "oxygen-type" bleach may be substituted for hydrogen peroxide, although it is slower acting. Very thorough rinsing is needed to remove this type of bleach from fabric.

Do not use or store hydrogen peroxide or oxygen-type bleach in metal containers or use it with metal objects. Metal may speed up action of the bleach enough to cause fiber damage. Also, metal in contact with hydrogen peroxide or bleach may tarnish and cause additional stains on fabrics.

#### lodine

Use tincture of iodine, which can be purchased at a drug store. It is used only for removal of stains in Group 9 (see p. 19).

CAUTION: Poisonous.

## Sodium thiosulfate

Use pure sodium thiosulfate or "fixer" sold in drug stores and photo supply stores. Do not use photo fixer solution that contains other chemicals in addition to sodium thiosulfate.

Sodium thiosulfate solution is used to remove iodine and chlorine bleach stains. (Chlorine bleach stains cannot be removed from wool, silk, or spandex.)

This solution keeps for several months if it is tightly capped.

## Vinegar

Use white vinegar; colored vinegar can leave a stain. Vinegar is safe for all fibers but changes the color of some dyes. If a dye changes color after vinegar has been used, rinse the color-changed area thoroughly with water and add a few drops of ammonia. Then rinse well with water again.

# Wet spotter

Prepare wet spotter by mixing one part glycerine, one part liquid hand dishwashing detergent, and eight parts water. Shake well before each use. This mixture is used to remove many kinds of stains.

Wet spotter may be conveniently stored in a plastic squeeze bottle with a small cap.

# Miscellaneous supplies

You will need bowls for soaking stained articles, medicine droppers, and a smooth stainless steel spoon.

## TREATING STAINS

Read this section to learn the most effective techniques for using stain removers. Procedures called for in the Stain Removal Guide (p. 11) are described here.

## **Testing Stain Removers**

Before you use any stain remover, including water, test it to be sure that it will not harm the fabric or dye. Test each stain remover and each method of treatment on an unexposed portion of the article—a seam allowance, hem, inside of pocket, or tail of shirt or blouse.

Some stain removers or treatments damage certain fibers. They may also cause fading or bleeding of dyes, loss of luster, shrinkage, or stretching. They may remove nonpermanent finishes, designs, or pigment prints.

Loosely woven fabrics and fabrics woven from low-twist yarns are likely to suffer yarn slippage if brushed or rubbed while wet.

Velvets with acetate pile should never be treated with a stain remover that contains water. Even the slightest rubbing can cause matting of acetate velvet pile that is wet with water.

If the substance needed to remove a stain will damage the fabric, take the article to a drycleaner as soon as possible. However, even a drycleaner cannot correct damage caused by some stains. Liquids that contain a high percentage of alcohol bleed some dyes, making it impossible to re-

store the color. Some fingernail polishes and polish removers cause permanent damage to acetate fabrics.

## Working Surface

The working surface for stain removal should be a hard surface of a material that will not be affected by any of the chemicals used.

A heavy glass pie pan, turned upside down, makes a good working surface. Other glass surfaces may also be used. The table or countertop should be protected from spilled or dripping chemicals with aluminum foil. Chemicals used for removing stains can damage the finish of a table or countertop and then transfer a new stain to the fabric you are working on.

# **Sponging**

When directions call for sponging, use the following procedure.

Place the stained area, stained side down, over a pad of absorbent material (see fig. 1). Damp-



Figure 1.—Sponging a stain. Use a folded piece of cloth and sponge lightly from the center of the stain to the edge.

### TEXTILE FIBER CLASSES

Under the Textile Fiber Products Identification Act of 1960, all textile products must have a label or tag identifying the fiber content. The percentage of each fiber must be shown. This information, along with care label information (see p. 3), can be helpful for stain removal as well as for normal care.

The following table shows the classes of textile fibers that are used on labels of fiber content.

#### **Natural Fibers**

#### Man-Made Fibers

```
Cellulosic (plant):
                                      Cellulose-based:
  cotton
                                        acetate and triacetate
  iute
                                        rayon
  linen
                                      Protein-based:
  minor fibers:
                                        azlon
    abaca
    banana
                                      Mineral-based:
    cattail, cisalpha
                                        glass
                                        metallic
    hemp
    hennequen
                                      True synthetics:
    kapok
                                        acrylic
    pina
                                        modacrylic
     ramie, grass linen
                                        anidex
     sisal
                                        aramid
                                        novoloid
Protein (animal):
                                        nylon
  silk
                                        nvtril
  wool
                                        olefin
  minor (specialty) fibers:
                                        PBI
    alpaca
                                        polyester
    angorra (rabbit)
                                        rubber and lastrile
    camel hair
                                        saran
    cashmere
                                        spandex
    fur fibers (pelt removed)
                                        vinal
    horsehair
                                        vinyon
    llama
                                         Teflon
    mohair
    vicuna
Mineral:
  asbestos
```

en another piece of absorbent material with the stain remover you have been directed to use. Sponge the stain lightly from the center toward the edge. The stain is less likely to form rings if you work from center to the edge.

Keep the wet area around the stain as small as possible. Sponge the stain irregularly around the edges so there will be no definite line when the fabric dries.

Change the sponging pad and the absorbent material under the stain as soon as you can see that any stain has been transferred to them. They should be changed frequently so that the released staining material will not be returned to the fabric.

Preventing rings.—If a fabric tends to form rings when sponged with a stain remover, use special care in sponging the stain. Apply only enough stain remover to the sponging pad to barely dampen it. Touch the pad to the stain very lightly so that the fabric will absorb the stain remover slowly. Try not to let the wet area spread.

Before you dry the article, place the sponged area between dry absorbent material to remove excess moisture. Dry as rapidly as possible, but do not use heat on fabric treated with anything besides water.

Hardened stains.—For hardened stains, such as old paint or tar, place an absorbent pad under the stain and a pad dampened with the recommended stain remover on top of the stain.

Allow the article to soak until

the stain has softened. This may take half an hour to several hours. Keep the stain damp by adding more stain remover as needed. If the fabric is strong enough, you can use the edge of the bowl of a smooth spoon or the tamping brush to speed up release of the stain.

## **Flushing**

Flushing the stain is necessary to remove released staining material and to remove stain removal chemicals.

When the directions call for flushing, place clean absorbent material under the stain, then add the proper stain remover in small amounts with a medicine dropper or a container from which you can pour slowly. (see fig. 2). Do not add stain remover faster than the absorbent material can soak it up. Keep the treated area as small as possible. Change the absorbent material several times as you flush the stain.

Flushing is one of the most important steps in stain removal. If a stain removal chemical remains in the fabric it may later damage the fabric or cause another stain.



Figure 2.—Flushing a stain. Add the flushing liquid to the stain in small amounts so that the stain will not spread.

When you are directed to flush with water, and you are working on a washable article, you may substitute rinsing in a bowl of water. Dip the stained area up and down repeatedly in a bowl of warm water. Change the water at least twice.

# **Tamping**

Tamping the stain with a brush is highly effective in removing stains. For tamping, place the stained area directly on the working surface without any absorbent material under the stain.

The best way to hold the brush is shown in figure 3. By holding the brush as shown you will be able to control the amount of pressure applied.

The tamping action is similar to driving a tack with a small hammer. Raise the brush 2 or 3 inches above the fabric and place it down squarely. Use a light action. Never use so much pressure that the bristles bend.

Fabric damage is much more likely to occur if the edge of the brush strikes the fabric than if the brush strikes the fabric squarely. Striking with the edge



Figure 3.—How to hold a brush for tamping a stain.

is also less efficient in removing stains.

Use the least amount of tamping that will remove the stain and never tamp enough to damage the fabric. Too much tamping can chafe the yarn or cause yarn slippage.

The amount of tamping a fabric can take without damage depends on the weave and yarn. A closely woven fabric of high-twist yarn will not be damaged as easily as a loosely woven fabric of yarn with a slight or moderate twist.

# Using a Spoon

The bowl of a smooth stainless steel teaspoon is an effective tool for loosening stains.

Place the stain directly on the working surface without any absorbent material underneath. Add the stain remover.

Hold the spoon as shown in figure 4. Move the spoon back and forth about 1/4 inch in each direction. Short strokes are the most effective. Do not press down with the spoon; this could damage the fabric.

Do not use this procedure on delicate fabrics.



Figure 4.—How to hold a teaspoon to "work" a stain.

# REMOVING STAINS FROM SUEDE AND LEATHER

It is safest not to attempt any major stain removal from suede and leather garments. These articles are impregnated with oils and finishes that are readily affected by drycleaning solvents. An attempt to remove a grease or oil stain with drycleaning solvent usually disturbs the finish and produces a light-colored area. The most that should be done is to very lightly sponge the surface with a cloth barely dampened with solvent.

Most dyes on suedes, especially the darker colors, are easily bled by stain removers containing water. Before trying any removal method, test the color of the article by very lightly sponging an unexposed seam allowance with a damp cloth. If no color is transfered to the damp cloth, you may very lightly sponge small stained areas with a cloth that is barely damp with water only. Do not use detergent or other stain removal agents.

When a suede or leather article becomes damp from water, whether from rain or stain removal, it must be dried in room temperature air. Do not apply heat in any way.

# REMOVING STAINS FROM VINYL

Some vinyl articles are resistant to drycleaning solvents, but many are likely to be damaged by solvents. Drycleaning solvent can remove the plasticizers used to soften vinyl, causing stiffening and greatly reduced garment life. If removal of an oil or grease attempted, stain is the cedure should consist of very lightly sponging the surface of the vinyl with a cloth barely dampened with dry-cleaning solvent. Do not make more than a few strokes of the sponging cloth.

Repeated rubbing will remove the plasticizer and may change the appearance of the vinyl surface.

Stain removal procedures using water and liquid hand dishwashing detergent with vinegar or ammonia are usually safe on vinyl. Test a hidden seam allowance before trying to remove the stain. A blotting action is the safest method for treating stains on vinyl. Do not use a rubbing or tamping action, because this may change the surface appearance.

# STAIN REMOVAL GUIDE

To use this guide, look up the stain you want to remove in the Stain Index (p. 24). The index

will direct you to a stain removal procedure. Most stains in this guide are classified into nine groups. Stains which do not fall into these groups are listed alphabetically.

Before treating a stain, read the section on Treating Stains (p. 7). Follow the safety precautions given in the Stain Removal Supplies section (p. 2) and on labels.

Use extra care in treating nonwashable fabrics. Keep the treated area as small as possible and do not wash the fabric. Nonwashable fabrics are more likely to be damaged by a tamping brush or spoon.

It may not be necessary to go through all the steps to remove the stain. When all the stain is gone, or when you have finished all the steps, wash the article if it is washable. If the stained article is not washable, be sure that all chemicals are thoroughly flushed out.

Work carefully and patiently. Often the results depend as much on the way the job is done as on the remover used.

# Group 1

Adhesive tape Automobile wax Calamine lotion Crayon, wax or grease

- \*Eyebrow pencil
- \*Eye liner
- \*Eye shadow Face powder
- \*Felt-tip marker ink
- \*Floor wax
- \*Furniture polish Furniture wax Grease Hair spray

Hand lotion
India ink
Insecticides
Lard
Lubricating oil
Makeup, liquid or pancake
Margarine
\*Mascara
Nose drops
Ointment or salve

Paint, solvent base or water emulsion Putty Rouge

- \*Shoe dye, black
- \*Shoe polish, all colors except white

\*Smoke Soot

Typewriter-ribbon ink

# Washable and Nonwashable Fabrics

- 1. Sponge with drycleaning solvent (see p. 7).
- 2. For delicate fabrics, apply dry spotter to stain and cover with a pad of absorbent material dampened with dry spotter. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with dry spotter.

For stronger fabrics, apply dry spotter and tamp or use a spoon (see p. 10). Keep stain moist with dry spotter and blot occasionally with absorbent material. Continue as long as any stain is being removed.

- 3. Flush with drycleaning solvent (see p. 9).
- 4. Repeat steps 2 and 3 until no more stain is removed.

- 5. Allow to dry completely.
- 6. Sponge with water.
- 7. For delicate fabrics, apply wet spotter and a few drops of ammonia. Cover with a pad of absorbent material dampened with wet spotter and let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with wet spotter and ammonia.

For stronger fabrics, apply wet spotter and a few drops of ammonia, then tamp or use a spoon. Keep stain moist with wet spotter and ammonia and blot occasionally with absorbent material. Continue as long as any stain is being removed.

- 8. Flush with water.
- 9. Repeat steps 7 and 8 until no more stain is removed.
- 10. Chlorine bleach may remove the final traces of stains marked by \*. Chlorine bleach should not be used on certain fabrics (see p. 4). Test colors to be sure they will not be changed. Use a solution of 1 teaspoon bleach to 1 tablespoon water. Apply with a dropper. Do not allow this solution to remain on the fabric more than 2 minutes. When the stain is removed, or after 2 minutes, flush with water onto clean absorbent material. Apply 1 teaspoon vinegar and again flush with water. Be sure that all bleach is removed.

# Group 2

- \*Cake frosting
- \*Catsup
- \*Cheese

- \*Cheese sauce
- \*Chili sauce
- \*Chocolate

Cocoa

Cream, dairy

Egg volk

Gravy

Ice cream

Mavonnaise

Milk

Pudding

Salad dressing

Sauces

Soups containing vegetables

\*Steak sauce

#### Washable Fabrics

- 1. Sponge with drycleaning solvent (see p. 7).
- 2. For delicate fabrics, apply dry spotter to stain and cover with a pad of absorbent material dampened with dry spotter. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with dry spotter.

For stronger fabrics, apply dry spotter and tamp or use a spoon (see p. 10). Keep stain moist with dry spotter and blot occasionally with absorbent material. Continue as long as any stain is being removed.

- 3. Flush with drycleaning solvent (see p. 9).
- 4. Repeat steps 2 and 3 until no more stain is removed.
  - 5. Allow to dry completely.
  - 6. Sponge with water.
- 7. For delicate fabrics, apply a few drops of liquid hand dishwashing detergent and a few drops of ammonia. Cover with a pad of absorbent material damp-

ened with water and let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with detergent and ammonia.

For stronger fabrics, apply a few drops of liquid hand dishwashing detergent and a few drops of ammonia, then tamp or use a spoon. Keep stain moist with detergent and ammonia and blot occasionally with absorbent material.

- 8. Flush with water. It is important to remove all ammonia.
- 9. Soak in a solution of 1 quart warm water and 1 tablespoon enzyme product for 30 minutes. Rinse with water.
- 10. Bleaching may remove the final traces of stains marked by \*. For chocolate stains, proceed to step 11. For other stains marked by \*, use chlorine bleach as directed on page 13, step 10.
- 11. For chocolate stains, bleach with hydrogen peroxide. Wet the stain with hydrogen peroxide and add a drop or two of ammonia. Add more hydrogen peroxide and a drop of ammonia as needed to keep stain moist. Do not bleach longer than 15 minutes. Rinse with water.

## Nonwashable Fabrics

- 1. Follow steps 1 to 8 for washable fabrics.
- 2. Moisten the stain with a solution of  $\frac{1}{2}$  teaspoon enzyme product and  $\frac{1}{2}$  cup warm water. Cover with a clean pad that has been dipped in the warm enzyme solution and squeezed nearly dry. Let stand 30 minutes. Add more

warm enzyme solution if needed to keep the area warm and moist, but do not let the wet area spread.

- 3. Flush with water.
- 4. Bleaching may remove the final traces of stains marked by \*. For chocolate stains, proceed to step 5. For other stains marked by \*, use chlorine bleach as directed on page 13, step 10.
- 5. For chocolate stains, use hydrogen peroxide as directed for washable fabrics (step 11).

# Group 3

Bath oil
Blood
Body discharge
Egg white
Eye drops
Fish glue
Fish slime
Hide glue
Mouthwash
Mucus
Sherbet
Soups containing meat
Starch
Vomit

Aftershave lotion

#### Washable Fabrics

- 1. Soak in a solution of 1 quart warm water,  $\frac{1}{2}$  teaspoon liquid hand dishwashing detergent, and 1 tablespoon ammonia for 15 minutes.
- 2. If the fabric is strong enough, tamp or use a spoon (see p. 10). Blot occasionally with absorbent material. Continue as long as any stain is being removed.
- 3. Soak another 15 minutes in the solution used in step 1.

- 4. Rinse with water. It is important to remove all ammonia.
- 5. Soak in a solution of 1 quart warm water and 1 tablespoon enzyme product for 30 minutes.
  - 6. Wash.
- 7. For all stains except blood, repeat step 5, then wash again.
- 8. For a blood stain that is not completely removed, wet the stain with hydrogen peroxide and add a drop of ammonia. Do not bleach longer than 15 minutes. Rinse with water.

#### Nonwashable Fabrics

- 1. Sponge with water (see p. 7).
- 2. For delicate fabrics, apply wet spotter and a few drops of ammonia. Cover with a pad of absorbent material dampened with wet spotter and let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with wet spotter and ammonia.

For stronger fabrics, apply wet spotter and a few drops of ammonia, then tamp or use a spoon (see p. 10). Keep stain moist with wet spotter and ammonia and blot occasionally with absorbent material. Continue as long as any stain is being removed.

- 3. Flush with water (see p. 9). It is important to remove all ammonia.
- 4. Moisten the stain with a solution of  $\frac{1}{2}$  teaspoon enzyme product and  $\frac{1}{2}$  cup warm water. Cover with a clean pad that has been dipped in the warm enzyme solution and squeezed nearly dry.

Let stand 30 minutes. Add more warm enzyme solution if needed to keep stain warm and moist, but do not let the wet area spread.

- 5. Flush with water.
- 6. If any stain is left, except a blood stain, repeat steps 2 to 5, then dry.
- 7. For a blood stain that is not completely removed, wet the stain with hydrogen peroxide and add a drop of ammonia. Do not bleach longer than 15 minutes. Flush thoroughly with water.

# Group 4

Airplane glue
Carbon paper

\*Carbon typewriter ribbon
Contact cement
Corn remover
Cuticle oil
Cuticle remover
Fingernail hardener
Household cement
Lacquer
Fingernail polish

\*Mimeograph ink

\*Mimeograph correction flu

\*Mimeograph correction fluid Mucilage Plastic Plastic glue Solder, liquid Varnish

# Washable and Nonwashable Fabrics

- 1. Sponge with drycleaning solvent (see p. 7).
- 2. For delicate fabrics, apply dry spotter to stain and cover with a pad of absorbent material dampened with dry spotter. Let stand as long as any stain is being removed. Change pad as it

picks up stain. Keep stain and pad moist with dry spotter.

For stronger fabrics, apply dry spotter and tamp or use a spoon (see p. 10). Keep stain moist with dry spotter and blot occasionally with absorbent material. Continue as long as any stain is being removed.

- 3. Flush with drycleaning solvent (see p. 9).
- 4. Repeat steps 2 and 3 until no more stain is removed. Allow to dry.
- 5. Apply amyl acetate to stain and cover with a pad of absorbent material dampened with amyl acetate. Keep moist for 15 minutes, blotting occasionally with absorbent material. Use a spoon to help loosen the stain. When not working on the stain, keep it covered with an inverted bowl to minimize evaporation.
- 6. Flush with drycleaning solvent.
- 7. Bleaching may remove the final traces of stains marked by \*. Use chlorine bleach as directed on page 13, step 10.

# Group 5

#### Beer

- \*Caramelized sugar Casein glue
- \*Coffee
- \*Cordials
  Corn sirup
  Cough sirup
  Fruit
- \*Fruit juices
- \*Fruit preserves Home permanent
- \*Jam

- \*Jelly
  - Maple sirup
- \*Mixed drinks
  Molasses
- \*Mud
- Shaving cream
- \*Soft drinks
- \*Suntan lotion
- \*Tea
- \*Tobacco

Toothpaste

- \*Vegetables
- \*Vinegar, colored
- \*Whisky
- \*Wine

#### Washable Fabrics

- 1. Soak in a solution of 1 quart warm water,  $\frac{1}{2}$  teaspoon liquid hand dishwashing detergent, and 1 tablespoon vinegar for 15 minutes.
  - 2. Rinse with water.
- 3. Sponge with alcohol (see p. 7).
  - 4. Wash.
- 5. Soak in a solution of 1 quart warm water and 1 tablespoon enzyme product for 30 minutes.
  - 6. Wash.
- 7. Bleaching may remove the final traces of stains marked by \*. Use chlorine bleach as directed on page 13, step 10.
  - 8. Wash.

### Nonwashable Fabrics

- 1. Sponge with water (see p. 7).
- 2. For delicate fabrics, apply wet spotter and a few drops of vinegar. Cover with a pad of absorbent material dampened with wet spotter and let stand as long

as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with wet spotter and vinegar.

For stronger fabrics, apply wet spotter and a few drops of vinegar, then tamp or use a spoon (see p. 10). Keep stain moist with wet spotter and vinegar. Blot occasionally with clean absorbent material. Continue as long as any stain is being removed.

- 3. Flush with water (see p. 9).
- 4. Apply alcohol to stain and cover with a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with alcohol.
- 5. If any stain is left, moisten the stain with a solution of ½ teaspoon enzyme product and ½ cup warm water. Cover with a pad that has been dipped in the warm enzyme solution and squeezed nearly dry. Let stand 30 minutes. Add more warm enzyme solution if needed to keep stain warm and moist, but do not let the wet area spread.
  - 6. Flush with water.
- 7. Bleaching may remove the final traces of stains marked by \*. Use chlorine bleach as directed on page 13, step 10.

# Group 6

Antiperspirant

\*Candy (for chocolate candy, see
Group 2)

Deoderant

- \*Fabric dye, red
- \*Food coloring, red
- \*Hair dye, red
- \*Ink, red
- \*Mercurochrome
- \*Merthiolate
- \*Metaphen
- \*Perspiration

Picric acid

- \*Stamp pad ink, red
- \*Urine
- \*Watercolor paint, red

#### Washable Fabrics

- 1. Soak in a solution of 1 quart warm water, ½ teaspoon liquid hand dishwashing detergent, and 1 tablespoon ammonia for 30 minutes.
  - 2. Rinse with water.
- 3. Soak in a solution of 1 quart warm water and 1 tablespoon vinegar for 1 hour.
  - 4. Rinse with water. Dry.
- 5. For delicate fabrics, apply alcohol and cover with a pad dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with alcohol.

For stronger fabrics, apply alcohol and tamp or use a spoon (see p. 10). Keep stain moist with alcohol and blot occasionally with clean absorbent material. Continue as long as any stain is being removed.

- 6. Rinse with water.
- 7. Bleaching may remove the final traces of stains marked by \*. Use chlorine bleach as directed on page 13, step 10.

#### Nonwashable Fabrics

- 1. Sponge with water (see p. 7).
- 2. Apply wet spotter and a few drops of ammonia. Let stand as long as any stain is being removed. Press stain every 5 minutes with clean absorbent material. Keep moist with wet spotter and ammonia.
- 3. Flush with water (see p. 9.)
- 4. Apply wet spotter and a few drops of vinegar. Let stand as long as any stain is being removed. Press stain every 5 minutes with clean absorbent material. Keep moist with wet spotter and vinegar.
  - 5. Flush with water.
- 6. Apply alcohol to stain and cover with a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Press pad hard onto the stain each time you check it. Keep stain and pad moist with alcohol.
  - 7. Flush with water.
- 8. Bleaching may remove the final traces of stains marked by \*. Use chlorine bleach as directed on page 13, step 10.

# Group 7

Bluing
Fabric dye, all colors except red
and yellow
Food coloring, all colors except
red and yellow
Gentian violet
Hair dye, black or brown
Ink, black, blue, green, or violet

Shoe dye, brown
Stamp pad ink, all colors except
red and yellow

Watercolor paint, all colors except red and yellow

#### Washable Fabrics

- 1. Soak in a solution of 1 quart warm water, ½ teaspoon liquid hand dishwashing detergent, and 1 tablespoon vinegar for 30 minutes. Agitate occasionally.
  - 2. Rinse with water. Dry.
- 3. Apply alcohol to stain and cover with a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Press pad hard onto the stain each time you check it. Keep stain and pad moist with alcohol.
- 4. Flush with alcohol (see p. 9). Allow to dry.
- 5. Soak in a solution of 1 quart warm water, ½ teaspoon liquid hand dishwashing detergent, and 1 tablespoon ammonia for 30 minutes.
  - 6. Rinse with water.
- 7. If any stain is left, use chlorine bleach as directed on page 13, step 10.

#### Nonwashable Fabrics

- 1. Sponge with water (see p. 7).
- 2. Apply wet spotter and a few drops of vinegar. Let stand 30 minutes or more. Blot every 5 minutes with clean absorbent material. Add wet spotter and vinegar as needed to keep stain moist.
- 3. Flush with water (see p. 9). Dry.

- 4. Apply alcohol to stain and cover with a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Press pad hard onto the stain each time you check it.
- 5. Flush with alcohol. Allow to dry.
  - 6. Sponge with water.
- 7. Apply wet spotter and a few drops of ammonia. Let stand at least 30 minutes. Blot with clean absorbent material every 5 minutes. Add wet spotter and ammonia as needed to keep stain moist.
  - 8. Flush with water. Dry.
- 9. If any stain is left, use chlorine bleach as directed on page 13, step 10.

# Group 8

Asphalt
Butter
Castor oil
Chewing gum
Coconut oil
Cod liver oil
Corn oil
Linseed oil
Olive oil
Peanut oil
Rubber cement
Safflower oil
Vegetable oil

# Washable and Nonwashable Fabrics

1. Place clean absorbent material under the stain. Apply drycleaning solvent and cover stain with a pad of absorbent material

dampened with drycleaning solvent. Change the absorbent material as it picks up stain. Keep stain and pad moist with solvent.

- 2. Apply dry spotter. Cover stain with a pad dampened with dry spotter. If the fabric is strong enough, remove pad every 5 minutes and tamp or use a spoon. Continue the alternate soaking and tamping or working with the spoon until all stain has been removed.
- 3. Flush with drycleaning solvent. Allow to dry.

## Group 9

Argyrol
Iodine
Penicillin
Photo developer fluid
Silver nitrate

# Washable and Nonwashable Fabrics

1. For Argyrol stain only, mix 1 tablespoon enzyme product with 1 quart warm water. Wet stain with this solution and allow to soak for 30 minutes. Flush or rinse with water (see p. 9) and proceed to step 2.

For other stains, sponge with water (see p. 7) and proceed to step 2.

- 2. For all stains except iodine, add just enough tincture of iodine to cover the stain.
- 3. Add 1 teaspoon of sodium thiosulfate crystals to ½ cup warm water and stir until completely dissolved. Wet the stain with this solution. Add a few drops of ammonia.

- 4. Flush with water.
- 5. If any stain is left, repeat steps 2 to 4.

### Acids

- 1. Sponge with water and ammonia (see p. 7).
- 2. Flush with water (see p. 9).
- 3. Add more water and ammonia and flush with water again.

NOTE: Strong acids may cause permanent damage.

### **Alkalies**

- 1. Sponge with water (see p. 7).
- 2. Flush with water (see p. 9).
- 3. Add more vinegar and flush with water again.

NOTE: Strong alkalies may cause permanent damage.

## Ballpoint Pen Ink

- 1. Apply lukewarm glycerine. If fabric is strong enough, tamp or use a spoon. Blot frequently by pressing hard on the stain with absorbent material. It is important to remove loosened stain immediately. Keep stain moist with glycerine. Continue as long as any stain is being removed.
  - 2. Flush with water (see p. 9).
  - 3. Apply wet spotter.
- 4. For fabrics that will not be damaged, tamp gently with a brush (see p. 10).

For delicate fabrics, use a spoon very gently (see p. 10).

- 5. Add several drops of ammonia and continue to tamp or use a spoon.
  - 6. Flush with water.

- 7. Repeat steps 3 to 6 until no more stain is removed.
  - 8. Flush with water.
- 9. If any stain is left, use chlorine bleach as directed on page 13, step 10.

## Black Walnut

- 1. Sponge with water (see p. 7)
- 2. For delicate fabrics, apply wet spotter and a few drops of vinegar. Cover with a pad of absorbent material dampened with wet spotter and vinegar. Let stand 5 minutes, then flush with water (see p. 9). Repeat alternate soaking and flushing until no more stain is removed.

For stronger fabrics, apply wet spotter and a few drops of vinegar, then tamp or use a spoon (see p. 10). Keep stain moist with wet spotter and vinegar. Blot occasionally with clean absorbent material. Continue as long as any stain is being removed.

3. If any stain is left, use chlorine bleach as directed on page 13, step 10.

### Candle Wax

- 1. Place stain between blotting papers or folded paper towels. Iron at low temperature. Replace papers and iron again. Continue changing papers and ironing until no more wax melts.
- 2. Sponge with drycleaning solvent (see p. 7) until all wax has been removed.
  - 3. If any stain is left, use chlo-

rine bleach as directed on page 13, step 10.

- 4. If any stain is left, apply wet spotter and a few drops of ammonia. If the fabric is strong enough, tamp or use a spoon (see p. 10). Otherwise let stand.
  - 5. Flush with water (see p. 9).
- 6. Repeat steps 4 and 5 until no more stain is removed.

### Chlorine

- 1. Mix  $\frac{1}{4}$  teaspoon color remover with  $\frac{1}{2}$  cup cool water. Sponge stain with this solution (see p. 7).
  - 2. Flush with water (see p. 9).

# **Epoxy Cement**

This stain cannot be removed.

## Grass

- 1. Sponge with drycleaning solvent (see p. 7) as long as any stain is being removed.
  - 2. Allow to dry.
- 3. Apply amyl acetate and rub stain gently with a pad of absorbent material dampened with amyl acetate.
- 4. Flush with drycleaning solvent (see p. 9). Allow to dry.
- 5. Sponge with water. If fabric is strong enough, tamp or use a spoon (see p. 10).
- 6. Add a small amount of wet spotter and several drops of vinegar. Continue tamping or using the spoon as long as any stain is being removed.
- 7. Flush with water. Allow to dry.
  - 8. Sponge with alcohol and rub

gently with a pad dampened with alcohol.

# Lipstick

- 1. Apply drycleaning solvent and dry spotter and blot immediately with absorbent material.
- 2. Repeat step 1 until no more stain is removed. If stain begins to spread, flush immediately with drycleaning solvent (see p. 9). Then continue to repeat step 1.
- 3. Let all drycleaning solvent evaporate.
- 4. Sponge with water (see p. 7).
- 5. Apply wet spotter and a few drops of ammonia. If the fabric is strong enough, tamp or use a spoon (see p. 10). Blot frequently with absorbent material.
  - 6. Flush with water.
- 7. Apply wet spotter and a few drops of vinegar. If fabric is strong enough, tamp or use a spoon. Blot frequently with absorbent material.
- 8. Flush with water. Allow to dry.
- 9. Sponge with alcohol. Allow to dry.
- 10. If any stain is left, use chlorine bleach as directed on page 13, step 10.

#### Metal

Take to drycleaner.

#### Mildew

- 1. Gently brush off excess stain.
- 2. Flush with drycleaning solvent (see p. 9).

- 3. Apply dry spotter and amyl acetate. Use a spoon very gently (see p. 10) or pat stain with a pad of absorbent material dampened with dry spotter. Work cautiously, because mildew weakens fibers.
- 4. Flush with drycleaning solvent. Allow to dry.
- 5. Sponge with water (see p. 7).
- 6. Apply wet spotter and vinegar. Use a spoon very gently or pat stain with a pad of absorbent material.
- 7. Flush with water. Allow to dry.
- 8. Apply alcohol and pat stain with a pad dampened with alcohol.
  - 9. Flush with alcohol.
- 10. Repeat steps 8 and 9 until no more stain is removed.
  - 11. Allow to dry.
- 12. If any stain is left, use chlorine bleach as directed on page 13, step 10.

#### Mustard

- 1. Place stain on a smooth surface and brush or carefully scrape off excess mustard.
- 2. Flush with drycleaning solvent (see p. 9).
- 3. If the fabric is strong enough, tamp or use a spoon (see p. 10).
- 4. Flush with drycleaning solvent. Allow to dry.
- 5. Sponge with water (see p. 7).
- 6. Apply wet spotter and vinegar. If the fabric is strong enough, tamp or use a spoon.
  - 7. Flush with water.

- 8. Repeat steps 6 and 7 until no more stain is removed.
- 9. If any stain is left, wet the stain with hydrogen peroxide and add a drop of ammonia. Do not bleach longer than 15 minutes.
  - 10. Flush with water.

### Pencil

- 1. Erase excess stain with a soft eraser. Be careful not to distort the weave.
- 2. Flush with drycleaning solvent (see p. 9).
- 3. Apply dry spotter and rub gently with a pad of absorbent material dampened with dry spotter.
- 4. Cover stain with a pad dampened with dry spotter. Let stand 30 minutes.
- 5. Flush with drycleaning solvent. Allow to dry.
- 6. Sponge with water (see p. 7).
- 7. Apply wet spotter and a few drops of ammonia. If fabric is strong enough, tamp or use a spoon (see p. 10).
  - 8. Flush with water.
  - 9. Allow to dry.
- 10. If any stain is left, repeat steps 6 or 8 until no more stain is removed.

# Perfume Washable Fabrics

- 1. Sponge with water (see p. 7).
  - 2. Apply wet spotter.
- 3. If the fabric is strong enough, tamp or use a spoon (see p. 10).
  - 4. Flush with water (see p. 9).
  - 5. Apply alcohol and cover with

- a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with alcohol.
  - 6. Flush with water.

#### Nonwashable Fabrics

- 1. Sponge with water (see p. 7).
- 2. Flush with water (see p. 9.)
- 3. Apply alcohol and cover with a pad of absorbent material dampened with alcohol. Let stand as long as any stain is being removed. Change pad as it picks up stain. Keep stain and pad moist with alcohol.
  - 4. Flush with water.

## Rust

Take to drycleaner.

## Scorch

NOTE: Scorched fabrics may be weakened. Stain removal treatment may further damage the fabric.

- 1. Wet the stain with hydrogen peroxide and add a drop of ammonia. Let stand for at least several minutes. Full bleaching action may take up to an hour. Keep area moist with hydrogen peroxide and ammonia.
- 2. Flush with water (see p. 9).

### Shellac

1. Sponge with drycleaning solvent (see p. 7).

- 2. Apply dry spotter. If the fabric is strong enough, tamp or use a spoon (see p. 11).
- 3. Flush with drycleaning solvent (see p. 9).
- 4. Apply alcohol. If the fabric is strong enough, tamp or use a spoon.
  - 5. Flush with alcohol.

## White Shoe Polish

- 1. Sponge with drycleaning solvent (see p. 7).
- 2. Apply dry spotter. If the fabric is strong enough, tamp or use a spoon (see p. 11).
- 3. Flush with drycleaning solvent (see p. 9).
- 4. Repeat steps 1 to 3 until no more stain is removed.
- 5. Sponge with amyl acetate. If the fabric is strong enough, tamp or use spoon.
- 6. Flush with drycleaning solvent. Allow to dry.
  - 7. Sponge with water.
- 8. Add a few drops of vinegar. If the fabric is strong enough, tamp or use a spoon.
  - 9. Flush with water.
- 10. Repeat steps 7 to 9 until no more stain is removed.

## Unknown Stains

- 1. Sponge with drycleaning solvent (see p. 7).
- 2. Apply dry spotter. If the fabric is strong enough, tamp or use a spoon (see p. 11).
- 3. Flush with drycleaning solvent (see p. 9).
- 4. Repeat steps 1 to 3 until no more stain is removed.
  - 5. Apply amyl acetate. If the

fabric is strong enough, tamp or use a spoon.

- 6. Flush with drycleaning solvent. Allow to dry.
- 7. Sponge with water. Add wet spotter and a few drops of vinegar. If the fabric is strong enough, tamp or use a spoon.
- 8. Apply wet spotter and a few drops of ammonia. If the fabric is

- strong enough, tamp or use a spoon.
  - 9. Allow to dry.
- 10. Sponge with alcohol and pat with a pad of absorbent material dampened with alcohol.
  - 11. Allow to dry.
- 12. If any stain is left, use chlorine bleach as directed on page 13, step 10.

## STAIN INDEX

	GROUP	PAGE		GROUP	PAGE
Acids (see also picric acid)	_	20	Chlorine	_	21
Adhesive tape	1	12	Chocolate		13
Aftershave lotion	3	14	Clothing dye (see fabric dye)	)	
Airplane glue	4	15	Cocoa		13
Alcoholic beverages	5	16	Coconut oil	_ 8	19
Alkalies		20	Cod liver oil	_ 8	19
Antiperspirant	6	17	Coffee	_ 5	16
Argyrol	9	19	Cologne (see perfume)		
Asphalt		19	Contact cement	_ 4	15
Automobile wax	1	12	Copper (see metal)		
Ballpoint pen ink		20	Cordials	_ 5	16
Bath oil	3	14	Corn oil	8	19
Battery acid (see acids)			Corn remover	4	15
Beer	5	16	Corn sirup	_ 5	16
Berries	5	16	Correction fluid,		
Black walnut		20	mimeograph	_ 4	15
Blood	3	14	Cough sirup	_ 5	16
Bluing	7	18	Crayon, wax or grease	_ 1	12
Body discharge	3	14			
Brass (see metal)			Cream		
Butter	8	19	dairy	_ 2	13
Cake frosting	2	13	shaving	_ 5	16
Calamine lotion	1	12	Cuticle oil		15
Candle wax		20	Cuticle remover	_ 4	15
Candy (see also chocolate)	6	17	Deoderant		17
Caramelized sugar	5	16	Dishwashing machine deterge	ent	
Carbon paper	4	15	(see alkalies)		
Carbon typewriter ribbon		15			
Casein glue	5	16	Dye (see fabric dye, food		
Castor oil	8	19	coloring, hair dye, shoe dye	)	
Catsup	2	13	Egg white	_ 3	14
Cement			Egg yolk	_ 2	13
contact	4	15	Epoxy cement	_	21
epoxy		21	Eyebrow pencil	_ 1	12
household	4	15	Eye drops	_ 3	14
rubber	8	19	Eye liner	_ 1	12
Cheese, cheese sauce	2	13	Eye shadow		12
Chewing gum		19	Fabric dye		
Chili sauce		13	red	_ 6	17

GR	OUP PA	AGE		GROUP	PAGE
yellow (see unknown stains)			mimeograph		15
other colors	7 1	18	stamp pad		
Face powder	1 1	12	red	. 6	17
Fingernail hardener	4 1	15	yellow (see unknown stains		
Fingernail polish	4 1	15	other colors		18
Fish glue 3	3 1	14	typewriter ribbon		12
Fish slime 5	3 1	14	writing	_	
Flavoring extracts			red	6	17
(see perfume)			yellow (see unknown stains		
Floor wax 1	l 1	2	other colors		18
Floor wax remover			Insecticides		12
(see alkalies)			Iodine		19
Food coloring			Jam		16
red 6	3 1	7	Jelly		16
yellow (see unknown stains)			Juice	. •	10
other colors 7	7 1	.8	fruit	5	16
Flowers (see grass)	_		tomato, vegetable		16
Frosting, cake 2	2 1	3	Ketchup (see catsup)		10
Fruit, fruit juice 5	5 1	6	Lacquer	1	15
Fruit preserves 5		6	Lard		12
Furniture polish 1	1	2	Leaf (see grass)	1	12
Furniture wax 1	1	2	Linseed oil	Q	19
Gentian violet 7	7 1	8	Lipstick		21
Glue	_		Lotion		21
airplane 4	L 1	5	aftershave	9	14
casein5		6	hand		12
contact cement 4		.5	suntan		16
epoxy cement		1	Lubricating oil		10
fish 3		4			
hide 3		4	Makeup, liquid or pancake		12
household cement 4		5	Maple sirup		16
mucilage 4		-	Margarine		12
plastic 4		5	Mascara		12
rubber cement 8	1	-	Mayonnaise		13
Grass	2	-	Meat juice		13
Gravy2	_	_	Mercurochrome	-	17
Grease1		-	Merthiolate		17
Grease crayon 1		_	Metal		21
Gum, chewing 8		_	Metaphen	О	17
Hair dye	. 1	ð	Mildew		21
red 6	. 41	7	Milk		13
other colors 7			Mimeograph correction fluid _		15
Hair spray 1		_	Mimeograph ink		15
Hand lotion 1		_	Mixed drinks	•	16
Hide glue 3	. 13		Molasses		16
Home normanent	14		Mouthwash		14
Home permanent 5 Household cement 4			Mucilage		15
Ice cream 2			Mucus		14
		-	Mud		16
Icing, cake 2 Ink	13	ฮ	Mustard		22
	6	^	Nose drops	1	12
ballpoint pen	20		Oil	_	
felt-tip marker 1			bath	_	14
india 1	15	2	castor	8	19

	GROUP	PAGE	GROUP	PAGE
coconut	_ 8	19	Sirup	
cod liver	_ 8	19	chocolate2	13
corn	_ 8	19	corn 5	16
cuticle	_ 4	15	maple 5	16
linseed	_ 8	19	Smoke 1	12
lubricating	_ 1	12	Soft drinks 5	16
olive	_ 8	19	Solder, liquid 4	15
peanut	_ 8	19	Soot 1	12
safflower	_ 8	19	Soup	
vegetable	_ 8	19	meat 3	14
Ointment	_ 1	12	vegetable 2	13
Olive oil	_ 8	19	Stamp pad ink	
Oven cleaner (see alkalies)			red6	17
Paint			yellow (see unknown stains)	
solvent base	_ 1	12	other colors 7	18
watercolor			Starch 3	14
red	_ 6	17	Sugar, caramelized 5	16
yellow (see unknown			Suntan lotion 5	16
stains)			Tape, adhesive 1	12
other colors	_ 7	18	Tar 1	12
water emulsion		12	Tarnish (see metal)	
Peanut oil	_ 8	19	Tea 5	16
Pencil		22	Tobacco 5	16
Penicillin		19	Tomato juice (see vegetables)	
Perfume		22	Toothpaste 5	16
Perspiration		17	Typewriter ribbon	
Photo developer fluid		19	carbon 4	15
Picric acid		17	ink 1	12
Plastic		15	Unknown stains	23
Plastic glue		15	Urine6	17
Powder, face		12	Varnish 4	15
Preserves, fruit		16	Vegetables5	16
Pudding		13	Vegetable oil8	19
Putty		12	Vinegar, colored5	16
Rouge		12	Vomit 3	14
Rubber cement		19	Walnut, black	20
Rust		23	Watercolor paint	
Safflower oil	_ R	19	red6	17
Salad dressing		13	yellow (see unknown stains)	
Salve		12	other colors 7	18
Sauces		13	Wax	
Scorch		23	automobile 1	12
Shaving cream	_ 5	16	candle	20
Shellac	-	23	floor1	12
Sherbet		14	furniture1	12
Shoe dye	_ 0		Wax crayon1	12
black	1	12	Whisky5	16
brown		18	Wine 5	16
Shoe polish	- •		Writing ink	
white		23	red6	17
other colors		12	yellow (see unknown stains)	
Silver nitrate		19	other colors 7	18
MITTEL IIIII AUG	_ 0	10	001104 001010	